

*This was in file at 21 Oct 51 (19)
for unknown reasons. Para 1-3
is not there. I believe this table
is located elsewhere in
21 Oct 51.*

k. Subject of investigation:

a. Purpose of study:

Our principal goal remains the same as it was in the beginning: the investigation of drug effects on ego controls and volitional activities, i.e., can wilfully-suppressed information be elicited through the aid of drugs affecting higher nervous centers? If so, which agents are better for this purpose? What are the initial signs and symptoms of drug effects? Can these be recognized by the subject or observers?

We now add to these the following: Can these signs and symptoms be taught to security officers so that they can detect the use of such agents in themselves or others?

Practical purposes of this study are to gain information which will permit us to detect what work of a similar nature may be in progress in enemy hands (to be judged in escaped or returned prisoners). In my judgment this is less important than ourselves discovering how to elicit wilfully suppressed information from wartime prisoners. Both of these purposes are to my mind less urgent than obtaining information which will serve to guard individuals who possess top-level information from indiscretions caused by the use of drugs of the type studied here. There is no question that drugs are already on hand (and new ones are being produced) that can destroy integrity and make indiscreet the most dependable individual. Example: a physicist with top-level information could be made careless without his knowledge. In practical terms a table of signs and symptoms arising from the use of old and especially new drugs for the use of security officers will be prepared as information is obtained. (Much is already known about the "standard" agents, little or nothing about the new.) Such information is highly desirable for obvious reasons.

Background: General plan of study:

(1) Pilot Study: This is at present nearing completion.

It has consisted of a series of experiments employing an experimental design for study of the effects of drugs on conscious suppression of experimental or non-threat secrets. Drugs used have included pentothal sodium, sodium amytal, benzodrine, ethyl alcohol, scopolamine, morphine, methedrine, and multiple combinations of these drugs as well as hypnosis (c.f. semi-annual report of June 19, 1951). Since this initial report, modifications of this technic have been utilized in study of ether and mescaline subjects. These findings as well as those of marihuana and lysergic acid, on the agenda for the remainder of the year, will be described in the annual report.

In this pilot study the emphasis has been directed primarily at the effects of the above drugs on the overt behavior of the subjects, specifically on the ability of the subject to retain "experimental secrets" and maintain control of his voluntary activities. The procedure utilized has been outlined in the above-mentioned progress report.

In general, the results of this part of the investigation, with the exception of ether, have indicated that within the limits of the amounts administered,

intellectual functioning and volitional control has not been impaired sufficiently to break down the experimental set produced by the "secret". Thus the next step involves the evaluation of the various drugs as to their differential alteration of psychological functions essential to the maintenance of wilful control.

(2) As a result of the above pilot studies, it seems clear that the practical and security aspects of the investigation are only to be answered by evaluation of the differential effects of various drugs on psychological functions basic to ego control and volitional suppression. To this end, a systematic evaluation of the effect of drug agents on the functions necessary to the maintenance of ego controls has been instituted and constitutes the next step in the proposed continuation of the study.

This involves necessarily an arduous, step-by-step investigation of the effects of progressive amounts of drug as well as variation of interrogation procedure, in that drug effects do not bear a constant linear relation to the amount of drug given. The object of this phase of the investigation is to discover the best agent as well as the optimal doses (combined with the most effective interrogation procedure) to modify volitional control. For example, too large a dose of mescaline will induce such marked anxiety and loss of reality contact that information cannot be reliably obtained.

It is proposed that this further step in the investigation will be effected in the procedures to be subsequently described (cf (c), infra).

b. Nature of control work (cf (c) infra).

c. Method of procedure:

The prospectus for further work accordingly includes systematic survey, in the light of experience gained from the pilot experiments, of drug effects underlying the suppression mechanism. These include: (1) activation of anxiety associated with basic conflicts as well as that induced by the experimental situation, (2) breakdown of character defenses for the handling of anxiety, in particular those related to intellectual functions, (3) memory disturbance, (4) disorientation as to time, place, and person (particularly in regard to the change induced by the drug in the individual's capacity for realistic identification of the interrogation situation), (5) language changes (alteration of symbol-referent relationship).

Experimental Design:

I. Baseline evaluation of above functions by:

- (a) Physical examination
- (b) Psychiatric interview
- (c) Psychometric examination

- (1) Rorschach
- (2) Thematic Apperception Test
- (3) Projective Drawings
- (4) Gestalt Perception
- (5) Language analysis based on 3,000 word sample of standardized interview

- II. Administration of drug and repetition of evaluative procedures as above, plus the "experimental secret" technic.
- III. Placebo Experiments and the "Unknowns Technic": A placebo session will be interposed in a series of drug sessions to control suggestive effects of experimental procedure and to establish as objectively and soundly as possible the observations of the experimental team. These will be a part of the study where the agents used are employed as unknowns, unknown to all members of the team engaged in evaluation. Previous work in this laboratory has shown that the "unknowns technic" is absolutely essential when subjective responses are dealt with. The investigator's bias must be removed in this way. Using the same subject for as many different drugs as is medically feasible constitutes a control on individual differences. In the light of previous experiments it is judged that pentothal sodium, marijuana, scopolamine, morphine, ether, mescaline, and probably lysergic acid and its derivatives will be drugs of particular interest in this stage of the investigation.

Completion of this phase of the study will provide the information needed to draw up a table of drug signs and symptoms - subjective and objective - referred to in the "Purpose" section above.

- IV. A fourth phase of the work will be concerned in the future, as in the past, with the neurological effects of the agents studied, in this instance under experimental conditions.

The basic knowledge of the effects of these drugs on psychological functioning will then permit specific informed hypotheses of the "which drug for which purpose" nature, which should then be critically tested under "field" conditions, i.e., prisoners of war, if possible, Federal prisoners, if possible, security officers, etc., under threat conditions beyond the scope of civilian experimentation.